

MBI-0032.ST25.txt  
SEQUENCE LISTING

<110> Broun, Pierre

<120> Method for Modifying a Biosynthetic Pathway

<130> MBI-0032

<160> 8

<170> PatentIn version 3.0

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35 40 45

Gly Ser Ser Val Val Leu Asp Ser Glu Asn Gly Val Glu Thr Glu Ser  
50 55 60

Arg Lys Leu Pro Ser Ser Lys Tyr Lys Gly Val Val Pro Gln Pro Asn  
65 70 75 80

Gly Arg Trp Gly Ala Gln Ile Tyr Glu Lys His Gln Arg Val Trp Leu  
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Gly Thr Phe Asn Glu Glu Glu Ala Ala Ser Ser Tyr Asp Ile Ala  
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Val Arg Arg Phe Arg Gly Arg Asp Ala Val Thr Asn Phe Lys Ser Gln  
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Ala Glu Ile Val Asp Met Leu Arg Lys His Thr Tyr Ala Asp Glu Phe  
145 150 155 160

Glu Gln Ser Arg Arg Lys Phe Val Asn Gly Asp Gly Lys Arg Ser Gly  
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Leu Glu Thr Ala Thr Tyr Gly Asn Asp Ala Val Leu Arg Ala Arg Glu  
180 185 190

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Val Leu Phe Glu Lys Thr Val Thr Pro Ser Asp Val Gly Lys Leu Asn  
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Arg Leu Val Ile Pro Lys Gln His Ala Glu Lys His Phe Pro Leu Pro  
210 215 220

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Leu Ile Asn Leu Glu Asp Arg Thr Gly Lys Val Trp Arg Phe Arg Tyr  
245 250 255

Ser Tyr Trp Asn Ser Ser Gln Ser Tyr Val Leu Thr Lys Gly Trp Ser  
260 265 270

Arg Phe Val Lys Glu Lys Asn Leu Arg Ala Gly Asp Val Val Cys Phe  
275 280 285

Glu Arg Ser Thr Gly Pro Asp Arg Gln Leu Tyr Ile His Trp Lys Val  
290 295 300

Arg Ser Ser Pro Val Gln Thr Val Val Arg Leu Phe Gly Val Asn Ile  
305 310 315 320

Phe Asn Val Ser Asn Glu Lys Pro Asn Asp Val Ala Val Glu Cys Val  
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cag aat cag caa caa ctc gga tca tac gtt ccg gta ctt gag caa Gln Asn Gln Gln Leu Gly Ser Tyr Val Pro Val Leu Glu Gln 70 75 80	356
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aca ctg aat ttc ccg gag cat ttt gtg aat aag gaa agc gag ctg cat Thr Leu Asn Phe Pro Glu His Phe Val Asn Lys Glu Ser Glu Leu His 195 200 205 210	740
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245 250 255	

ggt cct gaa agt cct ctt tgg gat gat ttg gat agt tct cat cag ttt Gly Pro Glu Ser Pro Leu Trp Asp Asp Leu Asp Ser Ser His Gln Phe	932
260 265 270	

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275 280 285 290	

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35 40 45	

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Glu Gln Arg Gln Asp Pro Thr Met Gln Gly Gln Lys Gln Met Ile Ser	
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Phe Ser Pro Gln Gln Gln Gln Gln Gln Gln Tyr Met Ala Gln Tyr  
100 105 110

Trp Ser Asp Thr Leu Asn Leu Ser Pro Arg Gly Arg Met Met Met Met  
115 120 125

Met Ser Gln Glu Ala Val Gln Pro Tyr Ile Ala Thr Lys Leu Tyr Arg  
130 135 140

Gly Val Arg Gln Arg Gln Trp Gly Lys Trp Val Ala Glu Ile Arg Lys  
145 150 155 160

Pro Arg Ser Arg Ala Arg Leu Trp Leu Gly Thr Phe Asp Thr Ala Glu  
165 170 175

Glu Ala Ala Met Ala Tyr Asp Arg Gln Ala Phe Lys Leu Arg Gly His  
180 185 190

Ser Ala Thr Leu Asn Phe Pro Glu His Phe Val Asn Lys Glu Ser Glu  
195 200 205

Leu His Asp Ser Asn Ser Ser Asp Gln Lys Glu Pro Glu Thr Pro Gln  
210 215 220

Pro Ser Glu Val Asn Leu Glu Ser Lys Glu Leu Pro Val Ile Asp Val  
225 230 235 240

Gly Arg Glu Glu Gly Met Ala Glu Ala Trp Tyr Asn Ala Ile Thr Ser  
245 250 255

Gly Trp Gly Pro Glu Ser Pro Leu Trp Asp Asp Leu Asp Ser Ser His  
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Phe Gln Asp Ser Pro	Ala Gln Thr	Glu Arg Arg	Val Lys Tyr	Lys		
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Pro Lys Lys Lys Arg	Ala Lys Asp Asp	Asp Asp Glu	Lys Val Val	Ser		
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90	95		100			
tat cac ctc cct	aga cca gct	agt gcc gac	cct aaa gac	atc caa	gct	448
Tyr His Leu Pro Arg	Pro Ala Ser	Ala Asp Pro	Lys Asp Ile	Gln Ala		
105	110		115		120	
gcc gcc gca	gct gca gcc	gct gtg	gcc att gac	atg gat	gtt gag	496
Ala Ala Ala Ala	Ala Ala Ala Val	Ala Ile Asp	Met Asp Val	Glu		
125		130		135		
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Thr Ser Ser Pro	Ser Pro Ser Pro	Thr Val	Thr Glu Thr	Ser Ser Pro		
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Ala Met Ile Ala	Leu Ser Asp	Asp Ala Phe	Ser Asp Leu	Pro Asp Leu		
155	160		165			
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Leu Leu Asn Val	Asn His Asn	Ile Asp Gly	Phe Trp Asp	Ser Phe	Pro	
170	175		180			
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190

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His	Leu	Asn	Phe	Pro	Glu	Leu	Ala	Tyr	His	Leu	Pro	Arg	Pro	Ala	Ser
				100			105			110					

Ala	Asp	Pro	Lys	Asp	Ile	Gln	Ala								
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				130			135			140					

Thr	Val	Thr	Glu	Thr	Ser	Ser	Pro	Ala	Met	Ile	Ala	Leu	Ser	Asp	Asp
				145			150			155			160		

Ala	Phe	Ser	Asp	Leu	Pro	Asp	Leu	Leu	Asn	Val	Asn	His	Asn	Ile	
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 Met Gln Ser Lys Tyr Lys Gly Val Arg Lys Arg Lys Trp Gly Lys Trp  
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 gta tcg gag atc aga ctt cca cac agc aga gaa cga att tgg tta ggc 202  
 Val Ser Glu Ile Arg Leu Pro His Ser Arg Glu Arg Ile Trp Leu Gly  
 35 40 45  
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 Ser Tyr Asp Thr Pro Glu Lys Ala Ala Arg Ala Phe Asp Ala Ala Gln  
 50 55 60  
 ttt tgt ctc cgc ggc ggc gat gct aat ttc aat ttc cct aat aat cca 298  
 Phe Cys Leu Arg Gly Gly Asp Ala Asn Phe Asn Phe Pro Asn Asn Pro  
 65 70 75 80  
 ccg tcg atc tcc gta gaa aag tcg ttg acg cct ccg gag att cag gaa 346  
 Pro Ser Ile Ser Val Glu Lys Ser Leu Thr Pro Pro Glu Ile Gln Glu  
 85 90 95  
 gct gct gct aga ttc gct aac aca ttc caa gac att gtc aag gga gaa 394  
 Ala Ala Ala Arg Phe Ala Asn Thr Phe Gln Asp Ile Val Lys Gly Glu  
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 Glu Glu Ser Gly Leu Val Pro Gly Ser Glu Ile Arg Pro Glu Ser Pro  
 115 120 125  
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 130 135 140

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Ser Tyr Asp Thr Pro Glu Lys Ala Ala Arg Ala Phe Asp Ala Ala Gln 50 55 60	
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Pro Ser Ile Ser Val Glu Lys Ser Leu Thr Pro Pro Glu Ile Gln Glu 85 90 95	
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Phe Leu Asp Leu Leu Pro Met Asn Phe Gly Phe Asp Ser Phe Ser Asp  
145 150 155 160

Asp Phe Ser Gly Phe Ser Gly Gly Asp Arg Phe Thr Glu Ile Leu Pro  
165 170 175

Ile Glu Asp Tyr Gly Gly Glu Ser Leu Leu Asp Glu Ser Leu Ile Leu  
180 185 190

Trp Asp Phe  
195